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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/833,639	04/13/2001	Serguei Zhdanok	000348-263	3068

7590

05/02/2003

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EXAMINER

LANGEL, WAYNE A

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 05/02/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

833639

Applicant(s)

Zhdanov et al

Examiner

Langel

Group Art Unit

1754

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(h).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-17 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-17 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☒ All ☐ Some* ☐ None of the:

- ☒ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. _____

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 59446 ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892 ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948 ☐ Other _____

Office Action Summary

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) The invention was described in (1) an application for patent, published under Section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 6, 10, 13 and 14 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tonkovich et al. Tonkovich et al. disclose a method for conducting a catalytic chemical reaction by providing a catalyst material as a porous structure having a

porosity that permits molecular diffusion therein, and flowing at least one gas phase reactant through the porous structure. (See column 3, line 24 - column 4, line 50, and column 6, lines 6-25.) Tonkovich et al. teach at column 6, line 28 that the reaction may be employed for partial oxidation. The porous medium of Tonkovich et al. would inherently be "preheated beforehand" in a continuous partial oxidation process, since the exothermic heat of reaction from the partial oxidation would heat the porous medium. It is noted that applicant's claims do not require that heat be transferred from the porous medium to the reaction gas mixture, since the claims merely recite "making it possible" to heat the reaction gas mixture by heat exchange with the porous medium, as opposed to actually heating such reaction gas mixture by the porous medium. Regarding claim 2, Tonkovich et al. teach at column 4, lines 3-7 that the porous material may be a porous support of a non-catalytic material.

Claims 1-17 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, line 2, "of the type" renders the scope of the claim vague and indefinite. Also in claim 1, it is indefinite as to whether the phrase "thus making it possible to heat the reaction gas mixture by heat exchange with the porous medium . . ." would require that the reaction gas

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mixture actually be heated by heat exchange with the porous medium. In claims 9, 13, 14 and 17, it is indefinite as to whether the recitation of "proportions which make possible total combustion" would require proportions which actually result in total combustion.

Cole is made of record for disclosing a supported catalytic structure.

Helmers is made of record for disclosing a method for carrying out an endothermic reaction comprising passing a stream of material to be reacted through a bed of solid granular catalyst disposed in a conversion chamber, and supplying high frequency electrical current to a primary element outside of the catalyst bed to heat the element disposed within the catalyst bed.

Schuessler et al. is made of record for disclosing a method for producing hydrogen by feeding a reaction mixture comprising a hydrocarbon and water onto a catalyst formed by compressing at least one catalyst powder into a compressed layer to form a shaped body.

Autenrieth et al. is made of record for disclosing a reforming reactor with three serially arranged reactor steps, each of which is charged with a catalyst pellet fill.

Dindi et al. is made of record for disclosing a process for the catalytic partial oxidation of a hydrocarbon feedstock

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wherein an unsupported porous catalyst containing rhodium, such as rhodium foam, is used.

Chintawar et al., Gottzmann et al. and Prasad et al. are made of record for disclosing partial oxidation processes.

This application apparently discloses allowable subject matter.

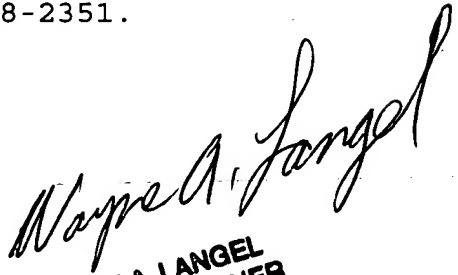
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne A. Langel whose telephone number is (703) 308-0248. The examiner can normally be reached on Monday through Friday from 8 A.M. to 3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (703) 308-3837. The fax phone number for this Group is (703) 305-7718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-2351.

WAL:cdc

April 30, 2003


WAYNE A. LANGEL
PRIMARY EXAMINER